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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/061,441	04/16/1998	LEO JOHN WILZ	38292R1	1675

7590 06/13/2005

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EXAMINER	
LY, NGHI H	

ART UNIT	PAPER NUMBER
2686	

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/061,441	WILZ, LEO JOHN	
	Examiner	Art Unit	
	Nghi H. Ly	2686	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-24 and 31-45* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *18-24,31 and 32* is/are allowed.

6)☒ Claim(s) *33-45* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Claims 18-24, 31-45 have been amended (or added) (see Applicant's amendments dated 08/26/2004 and 01/31/2005). The election/restrictions requirement (dated 12/29/2004) has been withdrawn. In addition, this action is made final. See MPEP § 706.07(a).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 33-35, 41 and 43-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Bruckert et al (US 6,018,651).

Regarding claim 33, Bruckert teaches a communications transceiver (see fig.1), comprising: a first antenna and a second antenna for selective operation in receiving mode (see fig.1, antennas 114 and 116), an intermediate frequency stage (see fig.1, IF processor 141) for selective connection with the first antenna in a first receiving mode to activate a first signal receiving path (see fig.1, switches 118 and 120), and for selective connection to the second antenna in a second receiving mode (also see fig.1, switches 118 and 120), to activate a second signal receiving path (also see fig.1, switches 118 and 120), wherein the signal receiving path from the first antenna to the intermediate

frequency stage when activated in the first receiving mode has a different signal processing characteristic than the signal receiving path from the second antenna (column 1, lines 35-58, see "received signal may not be simultaneously affected to the same extent by the multipath fading" and see column 2, lines 10-16) to the intermediate frequency stage when activated in the second receiving mode (see column 9, lines 40-58 and see column 10, lines 1 to column 12, line 9).

Regarding claim 34, Bruckert further teaches the first signal receiving path when activated includes an amplifier which provides a different signal processing characteristic than the second signal receiving path when activated, which lacks a corresponding amplifier (see fig.1, amplifier 135 and column 1, lines 35-58, see "received signal may not be simultaneously affected to the same extent by the multipath fading" and see column 2, lines 10-16).

Regarding claim 35, claim 35 is rejected with the similar reason as set forth in claim 33 above.

Regarding claim 41, claim 41 is rejected with the similar reason as set forth in claim 33 above.

Regarding claim 43, claim 43 is rejected with the similar reason as set forth in claim 33 above.

Regarding claim 44, claim 44 is rejected with the similar reason as set forth in claim 33 above.

Regarding claim 45, Bruckert teaches the second signal receiving path comprising an antenna (see fig.1, antenna 116), and a transmitter for coupling with the

antenna (see fig.1, transmitter 112), the selector system in a transmit mode connecting the transmitter with the second antenna (see fig.1, selector 120), and a low pass filter between the selector system and the second antenna for filtering the incoming radio signal from the second antenna in receiving mode when the second receiving path is selected (see fig.1, filter 137), while reducing the loss in transmit mode in comparison with the use of a bandpass filter (see column 15, lines 6-21).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 36 and 38-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckert et al (US 6,018,651) in view of George (US 3,636,453) and further in view of Baltus et al (US 5,751,249).

Regarding claim 36, Bruckert teaches the first signal receiving path comprising an amplifier for the received radio signal (see fig.1, amplifier 135).

Bruckert does not specifically disclose a feedback loop for providing a signal receiving path with different amplifier characteristics than the second signal receiving path.

George teaches a feedback loop for providing a signal receiving path with different amplifier characteristics than the second signal receiving path.

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of George into the system of Bruckert in order to provide an output at a relatively constant power level (see George, column 2, lines 41-43).

The combination of Bruckert and George does not teach the second signal receiving path which lacks a corresponding amplifier.

Baltus teaches the second signal receiving path which lacks a corresponding amplifier (see fig.2, amplifier component which is lacking in the second signal receiving path of antenna 4).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Baltus into the system of Bruckert and George in order to optimize reception in a multipath transmission environment (see Baltus, Abstract)

Regarding claim 38, claim 38 is rejected with the similar reason as set forth in claim 36 above.

Regarding claim 39, claim 39 is rejected with the similar reason as set forth in claim 36 above.

Regarding claim 40, Bruckert further teaches the first and second antennas for supplying a given incoming radio signal to the first and second signal receiving paths, respectively (see fig.1, antennas 114 and 116).

6. Claim 37 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckert et al (US 6,018,651) in view of George (US 3,636,453) and further in view of Robinson et al (US 5,138,27) and Baltus et al (US 5,751,249).

Regarding claim 37, the combination of Bruckert and George teaches claim 36. The combination of Bruckert and George does not specifically disclose the feedback loop includes a switch for selectively activating the feedback loop.

Robison teaches the feedback loop includes a switch for selectively activating the feedback loop (see the Drawing and see column 2, lines 50-53).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Robinson into the system of Bruckert and George in order to provide new and improved signal processing systems (see Robinson, column 1, lines 35-39).

The combination of Bruckert, George and Robinson does not teach the second signal receiving path which lacks a corresponding amplifier.

Baltus teaches the second signal receiving path which lacks a corresponding amplifier (see fig.2, amplifier component which is lacking in the second signal receiving path of antenna 4).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Baltus into the system of Bruckert, George and Robinson in order to optimize reception in a multipath transmission environment (see Baltus, Abstract)

7. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bruckert et al (US 6,018,651) in view of Baltus et al (US 5,751,249).

Regarding claim 42, Bruckert teaches in a communication system, a first antenna and a second antenna for selective operation in receiving mode (see fig.1, antennas 114 and 116), an intermediate frequency state for selective connection with the first antenna in a first receiving mode (see fig.1, IF processor 141), to active a first signal receiving path (see fig.1, switches 118 and 120), and for selective connection to the second antenna in a second receiving mode, to activate a second signal receiving path (see fig.1, switches 118 and 120), wherein the first signal receiving path when activated includes an amplifier component (see fig.1, amplifier 135), such that the first signal receiving path when activated in the first receiving mode has a different signal processing characteristic than the second signal receiving path when activated in the second receiving mode (column 1, lines 35-58, see "received signal may not be simultaneously affected to the same extent by the multipath fading" and see column 2, lines 10-16) to the intermediate frequency stage when activated in the second receiving mode (see column 9, lines 40-58 and see column 10, lines 1 to column 12, line 9).

Bruckert does not specifically disclose wherein the first signal receiving path when activated includes an amplifier component which is lacking in the second signal receiving path when activated.

Baltus teaches wherein the first signal receiving path when activated includes an amplifier component (see fig.2, amplifier 24) which is lacking in the second signal

receiving path when activated (see fig.2, amplifier component which is lacking in the second signal receiving path of antenna 4).

Therefore, it would have been obvious to one of the ordinary skill in the art at the time the invention was made to provide the teaching of Baltus into the system of Bruckert in order to optimize reception in a multipath transmission environment (see Baltus, Abstract)

Allowable Subject Matter

8. Claims 18-24 and 31-32 are allowed.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 18-24 and 31-32 are allowed for the reasons as set forth in the previous Office action dated 02/26/2004.

Response to Arguments

9. Applicant's arguments with respect to claims 33-40 have been considered but are moot in view of the new ground(s) of rejection.

On page 11 of applicant's remarks (dated 08/26/2004), applicant argues that Brucket does not disclose of first and second signal receiving paths providing "respective different signal processing characteristics for the given incoming radio signal".

The examiner, however, disagrees. Brucket indeed teach applicant's claimed limitation (column 1, lines 35-58, see "received signal may not be simultaneously affected to the same extent by the multipath fading" and see column 2, lines 10-16). In addition, claims 33 and 35 fail to further defined what a "signal processing characteristics" is. Therefore, Brucket indeed teaches Applicant's claimed limitation with the broadest reasonable interpretation.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nghi H. Ly whose telephone number is (571) 272-7911. The examiner can normally be reached on 8:30 am-5:30 pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on (571) 272-7905. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nghi H. Ly

06/04/05

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